CLINICAL PATHWAYS

IMPLEMENTATION MANUAL

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1. BACKGROUND AND OBJECTIVES OF THE CLINICAL PATHWAY MANUAL

1.1. Background - Usually, when national health care budgets decline rapidly and providers are faced with dramatic cuts in operating expenses, there is little time to assess how the cuts will affect the quality of services. Decisions are made by administrators who have no practical means of obtaining opinions and suggestions from physicians on how to reduce costs and preserve or improve quality of service. The clinical pathway offers a tool for physicians to analyze a typical course of treatment for each diagnosis for the primary purpose of preserving or improving quality of service and simultaneously effecting the efficiencies required by the administration for the facility to remain financially solvent. This manual is based on actual experiences of quality pathway teams in hospitals that have been faced with rapid reductions in their main source of revenue and, at the same time, have been expected to maintain a high quality of service to the same patient population regardless of their ability to pay.

1.2. Objectives of the Manual

1.2.1. The main objective of the Clinical Pathway Manual is to provide health care policy makers and managers a practical guide for understanding and implementing this quality and resource management tool.

1.2.2. In Ukraine, the pathway is regarded as a patient care management instrument designed and used by physicians. The nurse is regarded as team member who participates and contributes to the pathway process.

1.2.3. This manual is intended to offer examples of how clinical pathways can be applied in primary clinics, polyclinics and hospitals. Managers should adapt their own pathways to their specific patient care settings and unique circumstances.

1.2.4. The material in this manual is based on experience by Ukrainian physicians in developing their clinical pathways within the legal and clinical parameters of medical practice in this country.

2. DEFINITIONS -

An important initial step in designing any patient care management process is to reach consensus among the participating clinicians on what activities and procedures to include in the definition. Many terms are used for this process, but they are not necessarily interchangeable nor are they universally accepted. This leaves the clinical design team free to determine the definition that best fits their own situation. Some the terms and definitions were considered by the pilot clinicians are listed below:

2.1. Medical Practice Norms - This term and format was used for the clinical treatment protocols in the former Soviet Union. They provided detailed specialty treatment and referral steps that were mandated if certain patient conditions were identified.

2.2. Critical Paths - are "treatment regimens agreed upon by a consensus of clinicians that include only a few vital, essential elements proven to

affect patient outcomes, either by omission or commission of the treatment or by timing of the intervention."* They are formatted in a graphic time matrix and are applied in the hospital and/or critical - intensive care units.

2.3. Clinical Pathways - are "treatment regimens that include all of the elements of care regardless of the effect on patient outcomes. This is a broader look at the patient's condition and environment. While critical pathway contains only the essential elements, a clinical pathway includes other disciplines and other elements that may be "good to do," but are not absolutely critical to the care of the patient." * They are formatted in a graphic time matrix and can be applied in the primary clinic, polyclinic and hospital setting.

2.4. Practice Parameters - are "an agreed upon strategy for patient management that are within the ranges of acceptable practice as established by professional organizations. These are called **standards of practice** in some professions" and **clinical protocols** in others. "Practice parameters generally try to include all the possible "accepted" ways of handling a particular patient."* These statements are usually in narrative format with graphs inserted. They are not usually expressed in time lines.

*Richard Kaine, M.D., director of consulting services for Quality Management Resources Ltd in Atlanta, Georgia, U.S.A.

3. MULTIPURPOSE MANAGEMENT INSTRUMENT- The physicians of the Ukrainian pilot facilities are using the clinical pathway mapping technique for the following purposes:

3.1. Organizer for continuum of care - The family medicine physician specifies the primary care events and identifies the referral thresholds to the polyclinic specialist. The same process is used to plot the admission criteria to the hospital and discharge indicators back to the polyclinic and primary clinics. Duplication of tests and diagnostic procedures have been avoided by these multilevel reviews. A better appreciation of the physicians capabilities on each level of care has been obtained as a result of these protocol planning sessions.

3.2. Quality / Efficiency Balance - The physicians are analyzing the effectiveness and redundancy of diagnostic tests and therapeutic medications. The protocol review keeps them aware of costs of these tests and drugs they order. Although the global budget system has not been implemented down to the department level, physicians are becoming educated to the potential efficiencies that can be realized without compromising quality. They are tied by law to the old Soviet practice norms, but the new protocols have given them an opportunity to establish their own internal standards which they will be able to defend to any external reviewer when the time comes. Areas of quality that are being reviewed and challenged by the physicians are patient days with no therapeutic activity, referrals to specialists because of traditional norms, laboratory tests and medications that are proving to be ineffective and outdated.

3.3. Utilization Review Tool - Days in the hospital are being challenged by the team of primary and specialty physicians. They have focused on the first day after admission to check for tests and preparations that could be

performed in the polyclinics before admission. Also reviewed are days patients wait in the hospital for x-rays and laboratory tests because the equipment is being repaired or does not have the capacity to handle all the tests requested at one time. In non-emergent cases most admissions can be delayed or eliminated by testing these patients at the polyclinic sites. Other focus review areas are the last days of the patients' stays. Many of these days are convalescent in nature and include no diagnostic or therapeutic activities. Discharge to home with follow-up nurse visits or patient visits to the polyclinic is the appropriate protocol to increase efficient utilization of resources while improving quality of care.

3.4. Communication Tool - Physicians are finding that they have a clear and comprehensive graphic display of a typical course of treatment by diagnosis to discuss with fellow practitioners and nurses to gain their understanding and consultation on actual cases. Nurses have expressed a desire to communicate day to day variances of patient care that are valuable contributions to patient care rendered by the physician. Another potential use of the protocol is to produce a two way communication with the patient. Patient participation in nutrition, home medication, and post discharge activities will become another quality tool in the future.

3.5. Educational Tool - As the variances of actual practice are compared with the typical clinical pathways, physicians and nurses will begin to look at patterns emerging that will be good indicators of educational needs. Some infections could be associated to one practitioner who might need to review aseptic techniques. Others might reveal continuous outcomes that are substandard to the accepted norms. The clinical protocol is an excellent self-evaluation tool that the practitioner can confidentially proceed on an education course without official supervision.

3.6. Strategic Planning Tool - The transition team has recognized trends in practice precipitated by the protocol analyses that have significant effect on the plans to restructure the organization. For example, a review of the highest volume surgical procedures produced a decline of 20% in patient days. A similar reduction in other clinical departments could change the planned use of the hospital facility and expansion plans for the primary and polyclinics.

3.7. Augments Patient Record - Although the pathway has never been intended as a substitute for the patient record, it can produce valuable information about the patient in the variance record. This and other daily log notes on questions raised in the routine pathway review may be worth preserving in the patient record.

4. PHYSICIAN versus NURSE INITIATIVE - Traditionally, the physician in Ukraine is in charge of and is responsible for the daily care of the patient. The nurse responds to the physician's instructions without much independent action or decision making about clinical care. Therefore, physicians have taken the responsibility of designing and implementing the clinical pathways. They have been searching for a communication vehicle like the pathway to teach the nurses in the patient setting more clinical knowledge in order for them to take on more patient care responsibility. The nurses welcome participating in the formulation of the pathways because it gives them an opportunity to display their knowledge of the patient and to adapt to the physicians' style of patient management as an integral member of the patient care team. This physician initiative is in

contrast to the that of the pathway development in the United States where the nurses have taken the lead in formulating these protocols.

5. PATHWAY DESIGN - The sample form illustrated in Chart 5.1 on the next page includes the basic elements of the clinical pathway described below:

5.1. Heading with dual purpose - The left side of the heading can be used to develop a typical clinical protocol. It provides typical information of the hospital and diagnostic information about the "template" version of any diagnosis. The right side contains the patient information when the template is adapted to be used for actual cases.

5.2. Levels of Care - The vertical columns represent visits or days at various levels in the continuum of care of a patient with a designated diagnosis. In the example below, V 1-3 represents visits in a primary clinic. The next columns, H 1-9, signify hospital days. The next columns, P 1 and 2, are for polyclinic visits and the last columns are signifying feldsher visits.

5.3. Actions - The action column includes the typical services a patient could receive in any primary clinic, polyclinic or hospital in Ukraine. The physician reviewers enter into the appropriate visit or day columns the activities that should occur in a typical course of treatment for a designated diagnosis. For example, they would record what the typical laboratory tests, X-rays, medications and treatments would be ordered on a typical patient with diabetes when visiting a primary clinic, polyclinic both before being admitted and after being discharged from a hospital. The protocol also includes the posting of the same activities for each day the patient is in the hospital.

5.4. Clinical Activities - The first page of the template protocol displays all the activities performed by the doctor or nurse in a clinic setting. Usually, the patient is a passive subject during these activities and does not contribute to their performance.

5.5. Patient Participative Activities - The second page of the example clinical pathway displayed in Chart 5.1 below lists activities that should include patient and family participation.

5.5.1. Psycho-social Needs - The patient may need assistance of a psychiatrist in learning how to cope with a disease. Psychologists can be very helpful in this function, also, but few can be found on hospital staffs in Ukraine. Other problems at home may be contributing to the disease or pressure at work for which the patient needs counseling.

5.5.2. Teaching - The patient and family need to participate on instruction from the doctor nutrition, medications and infection control when returning home.

5.5.3. Continuous Care Plan - This section is maintained by the patient and presented to the practitioner at point of admission or registration at each level of care. The doctor, nurse, patient and family develop plans on the day of admission for a course of treatment after discharge from the hospital.

CHART 5.1

Hospital Name										Patient's Name				
										Patient Inform.				
Diagnostic Category														
Problem Codes														
Action	V 1	V2	V3	H1	H2	H3	H4-	-H9	P1	P2	P3	F1	F2	F3
Consultants														
Assessments														
Vital Signs														
Lab Tests														
X-Rays/EKG														
Medications/ IVs														
Treatments/ Procedures														
Nutri-Diet Input/Output														

Hospital Name										Patient's Name			
										Patient Inform.			
Diagnostic Category													
Problem Codes													
Action	V 1	V2	V3	H1	H2	H3	H4-	-H9	P1	P2	P3	F1	F2	F3
Patient Participative Activities														
Psycho-social Needs														
Teaching: *** medications** ***food/drug interaction** ***diet** ***activity** ***infection control** ***other**														
Continuous-care Plan ***hospital. admission** ***consults** ***office visit** ***home care** ***medicines** ***dressings** ***procedures** ***exams** ***tests** ***other**														

6.0 VARIANCE TRACKING - Once the pathways have been defined, the next step is the matching of the standard pathway of a typical course of treatment with actual patient cases with the same diagnosis. An example of a variance is an unanticipated event such as an infection or drug reaction that would alter the length and course of treatment. The variance form used is a companion document to the standard clinical pathway. When the pathway is used to monitor the treatment of an individual patient, the variance tracking record is often printed on the back of the pathway patient record. A representative format of a variance record is shown in Chart 6.1 below.

CHART 6.1

VARIANCE TRACKING RECORD

Date	Time	Variance (what)	Source (why)	Action Taken	Responsible Recorder

6.1 Variance Trending and Analysis - Uses of Variance Tracking - Over a period of six months to a year patterns can be detected such as a series of infections that can be traced to an operating room or a staff member who is an unsuspecting carrier of a microscopic pathogen. Some trends can be used as constructive indicators of additional training needed for an operator or practitioner to update skills to maintain accepted outcomes.

6.2 Treatment Outcomes - Practice patterns and patient outcomes can be compared over time with the agreed upon standard course to treatment. The results of treatment for a particular physician may be dramatically more successful than others. This may lead to educational sessions to discover the reasons for this success and, if appropriate, to incorporating them into an updated pathway. Also, a physician may have outcomes that are not as successful as the typical pathway. This trend may indicate the need for additional training or supervision by a peer physician.

6.3 Infection Control - This trending analysis technique is often applied in the department of surgery where a constant variance of infection can be traced back to a common surgical room, operator or hospital employee. Many times a physician or nurse is not aware that he or she is a carrier of a pathogen until properly tested. After the discovery, proper isolation and medication will correct the situation and the employee is allowed to continue his or her normal duties.

6.4 Duplication of Diagnostic Testing - The patient may be tested in a Polyclinic and again when admitted to the hospital. Physicians have not been accustomed to relying on tests ordered by other doctors. Nor have they had to be aware of the costs and, therefore, have ordered tests at their convenience. When the various traditional courses of treatments are matched against the typical

pathway duplicate tests are often identified during the initial stages of the trend analysis. This becomes more obvious if the trending is performed over different levels of care. i.e. primary, polyclinic and hospital.

6.5 Outdated, Ineffective Tests - This trend occurs usually when a medical system has relied on norms that were established many years ago by a central government authority. If these norms are still in effect, at least the pathway trend analysis will provide documentation for legislation to have the standards updated to improve quality of care and simultaneously to be compatible with the cost reduction incentives of the new per capita budget allocation system.

6.6 Medications - Duplication, Incompatibility, Ineffective - The same principle applies to medications as it does for diagnostic tests cited in section 6.5 above. A trending analysis applied to the traditional use of medications for the first time will usually reveal old remedies that have not caused any positive or negative outcomes over a significant period of time. Others may be discovered as detrimental to the recovery of a patient. If the trend analysis is conducted to include all levels of care the reviewers may discover that a drug prescribed in the primary clinic may be contra-indicated or incompatible with a drug prescribed by a specialist in the polyclinic or hospital. This may lead to a course of illness that could be costly to but avoidable by the health care delivery system.

6.7 Patient Stay - For each diagnosis, a consensus is reached on what the <u>average</u> length of stay will be for the <u>typical</u> patient admitted with that diagnosis. During the initial stages of the trend analysis usually reviewers discover that the first two days of an admission can be eliminated by diagnostic tests being performed in the polyclinic. Also, the multiple-day stay can be avoided when the patient is not admitted and does not have to wait in a queue for a piece of equipment to become available for a test. When the reviewers focus on the last two to five days of a hospital admission, they are likely to discover that little or no patient activity is occurring. The main reason for the stay is to assure total recovery of that the patient prefers the security of the hospital to that of home.

7.0 CASE MANAGEMENT

7.1 Definition - Case management is the process of surveillance of a physician/nurse team over the course of treatment of a patient to assure that services are being provided as efficiently and effectively as possible and on the appropriate level of care without compromising quality.

7.2 Duty Assignment - Once the top management of the organization has defined a set of clinical pathways and obtained agreement from the department heads to apply them to actual cases, the chief physician has to designate individuals in each area of the health complex to track the courses of treatment of each patient entering the system who will be monitored against these standard protocols. Usually the department head takes the ultimate responsibility for the monitoring process. However, authority must be delegated to other staff members because one person cannot track all patients on every level throughout their course of treatment. Some department heads delegate these tasks to other physicians and some assign them to head nurses or experienced staff nurses. The title given to these individuals is **case managers** and one is assigned to each twenty five to fifty bed unit in the hospital and each outpatient clinic in the complex. In large hospitals **unit or section managers** are appointed by the chief physician to supervise the case managers. Accompanying the assignment is a list of management responsibilities and objectives for which the case manager is

accountable to the department head or unit manager. The chief physician may delegate the economic (financial, human and material resources) reporting responsibility of the department head to the chief economist and the quality assessment reporting responsibility to the medical director. The two major areas of accountability are resource monitoring and quality assessment. A third area is usually considered in later stages of the program which is patient and family education. Usually the case managers functions are limited to staff and inventory utilization reporting and quality variance reporting. Trend analysis, corrective action and policy formulation occurs on the unit manager and / or department head level. For examples of job descriptions and policies of unit and case managers refer to Exhibit A and B in the Annex of this manual.

7.3 Resource Monitoring - The case manager is responsible for monitoring the use of medical, nursing and support staff which are referred to as human resources. This monitoring responsibility also includes tracking payroll costs and supply consumption and costs. Drugs are included as supplies.

7.4 Quality Tracking - The case manager is responsible of tracking all variance records and submitting them on schedule to the department head for trend analysis.

7.5 Patient Education and Participation The case manager is usually responsible for identifying the need for patient education through specialist counseling or care plan participation. The department head is responsible for obtaining the appropriate consulting specialist upon the recommendation of the case manager. Areas of patient and family education may include continuing medications at home, food and drug interactions, maintenance of proper diet after discharge and control and prevention of infection in the home setting. Often, participation of the patient and family in a post discharge plan for care at home will promote understanding and enhance recovery. Pathways being introduced in family medicine clinics and polyclinics should include a patient education segment of the physician's examination and treatment. Participation by the family members should be encouraged by the examining physician in order to identify any root causes of the patient's disease originating in the home environment.

8.6 Recommendations for Implementation - How to Get Started - Outlined below are a series of steps that have proven most successful in initiating clinical pathways particularly under severe time constraints. Success of applying the clinical pathway concept to any organization is actually applying the standards to patient cases and learning from the variances through conscientious self-evaluation in order to improve the quality of care.

8.7 Selection of Top Management Team - Once the chief physician has reviewed the purpose and principles of clinical pathways similar to the sections described above, and has decided to commit the organization to the process, he or she should select a team of about five but not more than ten top clinical managers that represent all major services and all levels of care in the health complex.

8.8 Agreement on Purpose - The pathway team should agree on why they are implementing this process. In Ukraine, the initiative to develop clinical pathways has originated with the medical staff in order to establish a sound basis for improving quality of care. A very important associated goal is to promote efficiency. However, quality improvement is the primary purpose of implementing these clinical pathways and that goal will not be obscured or

diminished by measures of economy and efficiency. In the pursuit of quality improvement the medical practitioners have been obligated by law to follow the clinical practice norms of the former Soviet Union which economic incentives than exist under the current per capita budget allocation system. Therefore, before any clinical pathway team starts its work it must decide why it is committing a significant amount of time and resources of the organization to the process.

8.9 Specify Roles and Responsibilities - Each member of the team should have a clear understanding of his or her role and assignment. The representation of each department or service area should be specified as equal or weighted according to size or relative importance to the survival and future of the organization.

8.10 Evaluate Case or Service Mix - Realistically evaluate the strongest and weakest services in the organization. Should some services be added or eliminated? How is the new patient choice environment going to effect the organization's ability to compete with neighboring institutions offering the same services? If the organization does not offer a full range of specialty services, what niche should it develop in a market oriented health delivery system?

8.11 Identify Diagnoses with Pathway Potential - Identify the top twenty five diagnoses that have the greatest potential for quality improvement and cost savings. By focusing on these diagnoses, the organization will develop a differentiation of service quality and price (user fee) from its competitor in the future. This noticeable difference will enhance choice of the institution by the patient.

8.12 Review Patient Data - For each diagnosis, specify each step of a perceived typical course of treatment. Review actual patient records for a reality check to what is actually being practiced.

8.13 Design a Prototype Pathway - Agree on the pathway format and content. Receive input from all specialties on the original design. Decide if only one level or several levels of care will be included. i.e. primary, polyclinic and hospital.

8.14 Present Prototype - Present the prototype to a larger segment of the medical staff for broader input and acceptance.

8.15 Present Final Revisions of Pathways - Present final revisions of all the clinical pathways to the medical staff peers by appropriate specialty before the pilot project starts. This review and comment opportunity should include members of the ancillary service and nursing staff. Incorporate as many ideas as possible into the last version in order to gain acceptance from those who will use the pathways. A genuine feeling of ownership will help build confidence and cooperation in implementing the new system.

8.16 Select Test Pilot Diagnoses - In each department selected for the pilot project (not necessarily all departments and clinics in the complex) choose diagnoses that have relatively homogeneous characteristics i.e. the course of treatment is fairly predictable and not prone to unexpected complications. To start with three to five diagnoses per department is enough. Determine for all test departments a common start date, interim review and correction dates and end dates for the pilot period.

8.17 Conduct Educational and Critique Sessions - Conduct educational sessions with the department heads in order for them to become informed and committed pathway instructors and coaches for their departmental implementation teams. Hold frequent small staff meetings to discuss

variances and revisions in the pathways that become obvious by tracking actual cases. As the medical and nursing staff identify practical changes, they will become more comfortable about using the pathway as a routine quality and resource management tool.

8.18 Identify and Analyze Trends - Over the pilot period, the department teams should be able to pick up patterns common to many or all cases. At the end of the period, which can be six to nine months, each department should validate the data collected and analyze it for variance trends. An interdepartmental conference should be conducted to compare similarities and differences in the pathway development.

8.19 Promote Improvements - Disseminate throughout the organization the documented improvements in patient care, treatment outcomes and patient satisfaction. Also, credit staff for any reductions in lengths of stay, costs, improvements in technique and innovative ideas resulting from application of the pathway process.

9.20 Helpful Tips and Lessons Learned - Many health care organizations have planned and prepared very detailed clinical pathways but never took the most difficult but valuable step of implementing them. They never realized the significant commitment to changing old habits that is required to genuinely improve patient care. Therefore, the suggestions listed below are some of the helpful tips from some of the pathway teams that have persisted and succeeded against great obstacles.

9.21 Keep the Pathway Purpose in Mind - When the design team becomes involved in debate over the elements and content of the pathway, at times it helps to stop and remind the members that the pathway is a collective, hypothetical opinion about the most efficient and effective course of diagnosis and treatment for a "typical" patient with a given diagnosis to reach a defined clinical goal or a reasonably expected outcome. With that purpose in mind, the design team may be able to keep long debates to a minimum and reach consensus with the assumption that the initial version will be subject to change upon analysis of the variance trends.

9.22 Start with Simple, Predictable Diagnoses - When the team is learning how to apply pathway technique to clinical practice, acceptance of needed changes by experienced physicians is difficult. In order to enhance this acceptance, start with diagnoses that are fairly consistent and predictable. The patient population characteristics could be homogeneous such as age and sex. Diagnoses that are difficult to diagnose, require highly specialized services and are prone to complications, co-morbidities and unpredictable events should be avoided as initial prototype pathways. The design teams in the Oblast clinic hospitals might have a tendency to start with multiple injury trauma or cardiac surgical cases because they are high cost and appear to have high potential for savings. However, a typical case for these diagnoses is rare and secondary complications occur frequently.

9.23 Select Top Twenty Highest Volume Diagnoses - In Ukraine, prepaid, per-capita budget allocation is just beginning. Health insurance is in a conceptual stage. Therefore, the usual initial selection criteria for pathways of high cost / high volume is not applicable. The high volume diagnostic categories are pertinent because reduction in admissions, lengths of stay and

patient days can result in lower direct operating costs. At this stage in the new health care payment system, costs are reduced to reach a break even financial condition. In the near future, when modest user fee revenues are generated, cost reduction measures will begin to produce real savings which can be applied to needed supplies and incentive pay. The best strategy for high cost diagnoses for the foreseeable future is to eliminate them and concentrate on the mid-range and low cost treatments and procedures that can be performed in an ambulatory clinic.

9.24 Focus on Hospital Care First - Hospital care is the most expensive and the easiest to define the boundaries. The surgical department is good place to start in the hospital. Surgical conditions, procedures and outcomes are more defined than the therapy (internal medicine) and other non-surgical specialties like psychiatry. Start where the efforts of the pilot project will yield the most visible and rewarding quality improvement and cost reduction results.

9.25 Risks and Benefits of the Multi-level Clinical Pathway - The pathway project that includes a typical course or continuum of treatment from the primary care clinic to the polyclinic and the hospital may lead to theoretical debates on jurisdictional issues and referral thresholds by the primary physicians and the specialists. Strong leadership is needed on the design team to coordinate these interests into a collaborative process that will result in a comprehensive coordinated treatment pattern that eliminates duplication and provides health care on the most efficient level while improving quality and patient satisfaction. Some of the most common jurisdictional, referral questions are: 1.) When is a diabetic patient referred to a specialist? 2.) When is a patient with a history of hypertension and high blood pressure referred to a cardiologist? 3.) When is a maternity patient with potential perinatal complications referred to an obstetrician? 4..)When does a family physician refer a child to a pediatric specialist or a maternity case to an obstetrician? 5.) What diagnostic tests can be performed in a primary care clinic or a polyclinic without being duplicated in a hospital?

9.26 Choose a Realistic Time Frame - In their initial enthusiasm and being under pressure of the small budget to cut costs, design teams may have a tendency to reduce the time frame of the hospital stay to an unrealistic number of days. A conservative time frame weighing on the longer stay is a more acceptable approach to the patient and the attending physician. Sequel reviews may indicate further reduction, however, radical changes in the beginning of the pathway project may cause unnecessary resistance that could undermine the support of the medical staff. During the formative years of per-capita financing and the introduction of user fees a dramatic reduction in admissions and patient days will not have a proportionate effect on tangible savings that can be applied to supplies and incentive pay. When the facility is authorized to control and decentralize its internal budget and when significant revenues are generated from user fees, enterprise contracts and insurance funds, maximizing efficiencies while improving quality will be essential for succeeding in a competitive market oriented health delivery system. Therefore, providers have a few years to test pathways to improve

their design for effectiveness before they are used to their maximum potential.

9.27 Consistent Patient Care Function Categories - The design team should agree on a set of patient care function categories that will be listed on the column on the left of every clinical pathway in the organization. The template pathway displayed above as Chart 5.2 contains ten functional categories beginning with Assessments and ending with a Continuous Care Plan. The first seven categories represent activities that the doctor, nurse or technician perform usually without the participation of the patient. The last three categories include patient and family participation. They are Psycho-social needs, Teaching and Continuous Care Plan. Design teams adapt their categories to the style and philosophy of care of their organization. Some teams start with the clinical categories (top seven) first to establish common diagnostic and treatment patterns. The previous Soviet system of care did not include patient participation in its protocols. Therefore, development of these last three categories is new and will take more time to implement into the normal course of treatment. However, one pilot facility has recently added a psychiatrist to its design team to develop these patient categories in order to prepare for a market oriented delivery system in the near future. Providers who offer health care that involves patient and family participation will be able to differentiate their services from those of their competitors in the view of the patient who is free to choose doctors and hospitals.

9.28 Secure a Home for the Specialists - With all the emphasis being put on the importance of the primary care physician, preservation and strengthening of the role of the specialist should not be minimized or obscured. The clinical pathways should be designed to shift as many specialty treatments and procedures from the hospital to the polyclinic. The diagnostic center of the future should be focused at the polyclinic level. Therefore, the hospital will become a supportive unit to the specialty hub, the polyclinic, with the exception of the tertiary Oblast clinic hospital complex. In this setting the hospital will remain the specialty hub.

9.29 Determine if your Design will be "Status Quo" or "Best Practice" "A 'status quo' clinical pathway is a hypothesis of the best way to manage patients based on the knowledge and experiences of clinicians who practice in the facility. A 'best practice' clinical pathway is a hypothesis that also includes the recommendations of published clinical practice guidelines, research studies, recognized international quality providers and other respected practitioners in the local community….. Physicians in all departments must work with the design team to answer a wide range of clinical questions that ultimately become the foundation of the 'best practice' definition at the institution. For Example:

- Does the patient require hospitalization?
- Can the patient be admitted on the day of surgery?
- What level of care (primary, polyclinic or hospital) does the patient initially require?
- How long should the patient remain in a hospital bed?
- What care activities are occurring on the last days before discharge?

- What is the optimal length of time for a given surgical procedure (minimizing risk of blood loss, anesthesia effect and other adverse health effects)?
- What is the appropriate timing of key events in patient recovery?
- What are the best and most cost-effective drug, test and supply choices?
- What is the appropriate length of administration of a drug?
- What is the appropriate frequency of administration for this drug?
- What is the proper interpretation of test results and what treatment do they indicate?
- How often should a test be repeated?
- What are appropriate uses of rehabilitative services?
- What is an acceptable cycle time for test results?
- How can communication be improved to reduce system duplication or errors?" **

**Section 9.9 is an excerpt from The Manual on Critical Pathways, chapter on pathway development, page 6, authored by Patricia L. Spath, ART, BA, Consultant in Health Care Quality and Resource Management ,Forest Park, Oregon, U.S. A

10.30 Advanced Concepts not Included - Because the pilot facilities of this project are in their first year of clinical pathway development, the following concepts have not been introduced in this manual:

10.31 Outcome Coding
10.32 Clinical Pathways categorized by Diagnostic Related Groups
10.33 Variance Cause and Source Coding
10.34 Case Management Hospital Admission Screening
10.35 Cost Savings Tracking and Analysis
10.36 Computer Assisted Clinical Pathway Analysis
10.37 Computer Assisted Variance Tracking
10.38 Patient Problem / Nursing Diagnoses Coding and Charting
10.39 Clinical Pathways linked to Continued Quality Improvement Cycles
10.40 Clinical Pathways as Supportive Documents to Patient Records
10.41 Clinical Pathways as Continuing Patient Satisfaction Indicators
10.42 Clinical Pathway as an Accountability Instrument

Summary

11.0 Key Points for Implementing Clinical Pathways

11.1 Head Doctor Commitment - The head of the organization must establish a clearly stated policy that clinical pathways will be implemented in specific or all departments over a given period of time. The personal support of the head doctor will be stated and followed by examples of time and effort.

11.2 Select a Representative Top Management Design Team - Select the leaders who have a progressive, "can do" attitude. All departments and levels of care included in the pathway project should be represented or have the opportunity to make suggestions to the design team.

11.3 Review Patient Services Data and Select Departments for Pathway Analysis - Select the diagnoses with the greatest potential for resource utilization and patient day reduction. Hospital departments with defined out comes such as surgery are good starting points.

11.4 Design and Present a Prototype Pathway - The design team should present a prototype pathway to a broad representation of the selected departments with educational programs on why and how the clinical pathways will be used. Participation and ownership of the initial design by the medical staff enhances cooperation during the implementation phase.

11.5 Field Test and Redesign - Adapt the prototype to fit the needs of each department. Keep the basic elements in tact for comparative interdepartmental analysis in the future.

11.6 Identify and Analyze Trends - After six to nine months the departments should be able to identify trends in variances from the "typical" pathway for each diagnosis. These trends may indicate a need to alter the pathway or to change a course of treatment.

11.7 Conduct Educational, Critique Sessions - Emphasize improvement and constructive critique in the educational sessions. Opportunities for individual performance improvement might be identified in a private session with department head and the physician involved.

11.8 Promote Improvements - Physicians and nurses who have demonstrated improvements in efficiencies and quality of patient care should be recognized and rewarded. These individuals could be future leaders of the pathway program which would be extended beyond the experimental period on a permanent basis.

CLINICAL PATHWAYS

ANNEX SECTION

Examples from Other Hospitals of:

Case Management Job Descriptions and Policies

Clinical Pathways from Ukrainian Hospitals

Clinical Pathways from United States Hospitals

Variance Charts from United States Hospitals

Exhibit A - 1

Case Manager
Position Description

Position Summary - Accountable to the Unit Manager for the reporting of the utilization of all resources applied to the care of the patients admitted to the inpatient units.

Position Accountabilities

1. Collects data on all resources used in patient care, records on the appropriate forms and enters into the computer systems. For example: hours worked and hours paid to employees on the unit (human resource accounting) supplies inventory and supplies used, drugs in inventory and drugs used (material resource accounting).
2. Works with nurses, doctors and unit manages in establishing standards and parameters of resource consumption.
3. Monitors the utilization of resource consumption and makes inquiries of the nurses and doctors (with the consent of the head nurse and department chief) of the variances from the utilization standards.
4. Works with the unit manager, head nurse and department chief on developing monthly and annual budgets for the departments. This process will be started no later than two months before the effective date of the budget year. The global, institutional budget will be established by the prospective global allocation contracted by the regional insurance company. The allocated amount will be portioned by the Economic Deputy (approved by the Director) and communicated through the unit manager to the case manager. This internal resource allocation will be distributed to the departments in a way that the total of the departmental budgets does not exceed the contracted global, institutional allocation.
5. Works with the unit, manager, head nurse and the doctors to resolve patient delay problems to deep the patient stay as brief and efficient as possible. This duty may include working with such departments as radiology, laboratory, or central operating theaters to improve scheduling systems and communications to avoid patient care delays.
6. Maintains records and inventories of equipment and instruments and works with the unit manager to achieve appropriate and timely acquisitions and inventory levels.
7. Works with the head nurse and department chief to identify standard lengths of stay of' inpatients in accordance with their diagnosis. Eventually other parameters of care can be identified as targets of standard treatment such as tests, consults, medications, patient activity, nutrition and discharge planning.
8. Monitors actual course of treatment with established standards and makes the head nurse aware of variances for her to develop solutions, if indicated, with the physicians.
9. Performs other duties to enhance or improve the efficient operation of the department. For example: Take messages on the telephone and communicate them promptly to the appropriate party or obtain a special supply for a patient at the request of a physician or nurse.

Exhibit A - 2

Hospital Policy
Administrative Decisions made Related to Case Managers

1. Case managers are accountable to unit managers of unit economic matters.

2. Qualified candidates for case managers can be experienced ward head nurses, documentary nurses, secretaries, common nurses or head nurses. However, a head nurse is not eligible to be a case manager when the department has one case manager. When the department has two or three case managers, the head nurse can one of the case managers by not the coordinating case manager.

3. The case manager responsibilities will be considered additional tasks to the current position the candidate is performing.

4. The matrix management concept will be applied to this position. That is, the case manager will be accountable to the unit manager for all functions of that position listed in the job description. All other functions related to patient care he/she will be accountable to the head nurse of the unit.

5. Only departments who service inpatients will have case managers during the initial phase of this program.

6. Departments with thirty patients or less will have one case manager.

7. Departments with more than thirty beds will have two but no more than three case managers.

8. Central Operating Theaters and Anesthesiology will have more than one manager.

9. The case manager will collect records and analyze data. She/he will relay observations such as variances from standards and request explanations corrective suggestions from the doctors and nurses that can be passed along to the unit manager. However, the decisions will be made by the unit manager and the Economic Director for economic matters and by the head nurse and department chief for patient care and medical matters. (Refer to **Chart B**)

10. Because this position is new, the case manager will be authorized and expected to recommend changes in the scope of work and definition of the position to the unit manager.

11. In the beginning stages of development the case manager will focus on drug, tests and supply utilization review only. Other items of the budget will be assigned at the beginning of the fiscal year.

12. The case manager will be expected to take the initiative for self education on the job. However, the hospital will provide courses in middle management development in the following areas:

Exhibit A - 3

F.D. Roosevelt Hospital
Middle Management Curriculum

General Management Principles and Practical Applications

Principles of Economics Applied to Hospitals and Health Care

Computer Science and User-Friendly Formatting
Medical Informatics and Documentology with ICD-10 Nomenclature

Principles of Financial Reimbursement and the Slovakian Payment System

Pharmacology - Technology Update
Medical Technology Update
Quality Assessment
Risk Management
Principles of Materials Management and Logistics

This curriculum was developed from discussions with **Viera Rusnakova, Director of the Health Management School** and **Dr. Peter Findo, Deputy Director of the F.D. Roosevelt Hospital** and **Instructor at the Banska Bystrica University School of Management.** The two educational institutions will coordinate their faculty resources to provide courses to students in Banska Bystrica on or near the site of the Roosevelt Hospital. Funding for these courses must be identified before the curriculum can be activated.

Exhibit B - 1

Unit Manager
Position Description

Position Summary - The unit manager is accountable to the Economic Deputy of the hospital Director for **the analysis** and **efficient use of all resources** ordered, stored, assigned and utilized for patient care reported to her/him by **the** designated case managers. The unit manager will make recommendations for solutions to the economic problems the Economic Director who will **make decisions** in consultation with the hospital Director and Medical Deputy Directors.

1. Collects, compares and evaluates costs and efficiencies within the departments and between departments.

2. Identifies the best practices of efficiencies of comparable departments and recommends applications to deficient departments through the Economic Deputy Director.

3. Initiates departmental budgets based on the contracted hospital global budget communicated from the Director to the Economic Deputy Director.

4. Proposes corrective action to the Economic Deputy Director in the case of a department exceeding its budget. These actions will be effective in the next budget period. For example, corrections identified in January will be effective in the February monthly budget unless unusual conditions exist in which the department manager did not have control of the cost item. However, the Economic Deputy Director and the unit/case managers will be held accountable for corrective actions by the Director through the submission of and adherence to a written plan of action with specific time schedule that the problem will be solved.

5. Works with case managers and other unit managers through collaborative efforts of the departments to solve problems of patient care delays and inefficiencies.

Exhibit B - 2

Hospital Policy
Administrative Decisions related to Unit Managers

1. Three unit manager positions have been authorized to be filled with individuals who have been trained in health economics and have a minimum of three years experience as an economics engineer.

2. The **Medical Unit Manager** is accountable for resource utilization of the Medical Department and its divisions, Rehabilitation, Pediatrics and Psychiatry. The **Surgical Unit Manager** is accountable for the resource utilization of the Surgical Department and its divisions, Anesthesiology, Emergency and Operating Theaters. The **Ancillary Unit Manager** is accountable for the resource utilization of Pathology, Diagnostic Imaging, Pharmacology and Laboratories. **Refer to CHART C for graphic display of these assignments.**

3. The unit mangers will collect the data from the case managers and complete the appropriate forms, enter the data into the information system and submit diskettes promptly to the insurance companies. They will keep records of' payments and credits for the insurance companies and advise the Economic Deputy Director to take appropriate action to achieve the required efficiencies while maintaining established quality standards.

4. The unit managers will be expected to develop their role by analyzing and educating themselves initially. As the position becomes more defined, the hospital will offer educational courses from the local management school and the National Health Management School with a similar curriculum as that, proposed for the case managers but with more emphasis on economics and accounting.

Department: GYN
Physician: S. Burak
Diagnosis: Fibromyoma

Lviv CH #1
Clinical Protocol #1

Patient: Olga Lutzyshyn

Expected LOS: 8 days
Adm/Disch.: 8/11-8/19
Allergy: none
Hepatitis B: none

	Polyclinic Visits			Days of Stay (Hospital)			
Services	**1**	**2**	**3**	**1**	**2**	**3**	
Patient's assessment, blood preassure, temperature	satsisfact., fibromyoma for an operation	satisfactory	satisfactory	satsisfact., fibromyoma for an operation	satisfactory	average complexity	>>
Diagnostic procedures, tests	General blood test, general urine test, blood sugar, RH factor, coagulogram, blood group, Wasserman reaction, biochemical blood test, pap smear for cytologic examination, pap smear culturing, chest X-ray, blood preassure, pulse, ultrasonic diagnostics			EKG, blood preassure, pulse, temperature	Taking probe for histological examination, blood preassure, pulse, temperature	Blood preassure, pulse, temperature, general blood test, general urine test	>>
Treatment, medication, operation, physioprocedures, physical exercises, manipulations				Tranquilizers	Anesthetics, cardiac stimulators, antibiotics, infusion therapy, (hemotrans-fusion if needed)	Anesthetics, cardiac stimulators, antibiotics, infusion and vitamin therapy	>>
Patient regiment	out-patient	out-patient		bed-stay	bed-stay	bed-stay	>>
Diet	#15	#15	#15	#15	0	0	>>
Physioprocedures, manipulations, physical exercises	Preparation for the operation (sedative medication)			Preparation for the operation, tranquilizers, cleansing enema, syringing	Premedication, operation, supravaginal uretus amputation, catheterization of urinary bladder	Bandaging, toilet, catheterization of urinary bladder	>>
Consultations	ENT	Internist		Anesthesiologist, Head of the department (examination)	Anesthesiologist (examination)	Examinations by an anesthesiologist and Department Head	>>
Family and patient's education	To talk about the necessity of the operation			To talk about patient's health status, necessity of an operation, patient's consent	Taking care of the patient, appropriate regiment	Breathing exercises, patient's health status, operation volume	>>
Expected discharge date, reasons, changes				8	7	6	>>
Services	**P o l y c l i n i c**			**H o s p i t a l**			

Department: GYN
Physician: S. Burak
Diagnosis: Fibromyoma

Lviv CH #1
Clinical Protocol #1

Patient: Olga Lutzyshyn

Expected LOS: 8 days
Adm/Disch.: 8/11-8/19
Allergy: none
Hepatitis B: none

Days of Stay (Hospital)					Polyclinic Visits		
4	5	6	7	8	1	2	3
satisfactory	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
Blood preassure, pulse, temperature	Blood preassure, pulse, temperature	Blood preassure, pulse, temperature	Blood preassure, pulse, temperature, general blood test, general urine test	Blood preassure, pulse, temperature			Blood preassure, pulse, temperature
Anesthetics, cardiac stimulators, antibiotics, vitamins	Anesthetics, cardiac stimulators, antibiotics, vitamins	Anesthetics, antibiotics, vitamins	Vitamins, resorption therapy	Vitamins, resorption therapy	Vitamins, resorption therapy		Hormono-therapy
bed-stay	bed-stay	bed-stay	bed-stay	bed-stay	out-patient	out-patient	out-patient
1a	1b	#15	#15	#15	#15	#15	#15
Toilet, enema, physical exercises	Toilet, bandaging, physical exercises	Toilet, physical exercises	Stitch removal, bandaging, physical exercises	Toilet, physical exercises			Physical exercises, resorption massage
Internist (if needed)				Head of Department (examination)			
Recommendations on patient's nutrition	Recommendations on patient's nutrition, breathing exercises	Recommendations on patient's nutrition, breathing exercises	Recommendations on post-operation cicatrix care	Recommendations on patient's care, to talk about possible post-operative effects			Do not breathe in irritating substances!
5	4	3	2	1			
Hospital					Polyclinic		

Department: Surgery
Physician: V. Hlyva
Diagnosis: Hernia (inappr. for amb. tr.)

Lviv CH #1
Clinical Protocol #1

Patient: S. Dub

Expected LOS: 5 days
Adm/Disch.: 9/01-9/06
Allergy: none
Hepatitis B: none

	Polyclinic Visits		Days of stay (Hospital)		
Services	**1**	**2**	**1**	**2**	
Patient's assessment, blood preassure, temperature	satisfactory	satisfactory	satisfactory	satisfactory	>>
Diagnostic procedures, tests	General blood test, general urine test, blood sugar, coagulogram, chest X-ray, EKG, helmints feces test		Blood preassure, pulse, blood group	Blood preassure, pulse,	>>
Treatment, medication, operation, physioprocedures, physical exercises, manipulations			Sadative medication over night	Surgery, premedication, anesthetics over the night	>>
Patient regiment	out-patient	out-patient	bed-stay	bed-stay	>>
Diet	#15	#15	#1	0	>>
Physioprocedures, manipulations, physical exercises	Breathing exercises	Breathing exercises	Cleansing anema		>>
Consultations	Surgeon	Internist, cardiologist	Anesthesiologist		>>
Family and patient's education			To talk about patient's health status, necessity of an operation, patient's consent	Taking care of the patient, appropriate regiment	>>
Expected discharge date, reasons, changes			5	4	>>
Services	**Polyclinic**		**Hospital**		

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Page 1

Department: Surgery
Physician: V. Hlyva
Diagnosis: Hernia (inappr. for amb. tr.)

Lviv CH #1
Clinical Protocol #1

Patient: S. Dub

Expected LOS: 5 days
Adm/Disch.: 9/01-9/06
Allergy: none
Hepatitis B: none

Days of stay (Hospital)			Polyclinic Visits	
3	4	5	1	2
Comply with the complexity of surgery	satisfactory	satisfactory	satisfactory	satisfactory
Blood preassure, pulse, EKG, bandaging	General blood test	Bandaging	Pulse, blood preassure	Pulse, blood preassure, bandaging
Anesthetics	Anesthetics			
bed-stay	bed-stay	bed-stay	out-patient	out-patient
0	#1	#1	#15	#15
Physical and breathing exercises	Physical exercise	Physical exercise	Physical exercise	Physical exercise
			Surgeon (Family physician)	Surgeon (Family physician)
Breathing exercises, patient's health status, operation volume	Recommendations on patient's nutrition	Recommendations on patient's nutrition, breathing exercises		
3	2	1		
Hospital			Polyclinic	

Department:: Int. Medicine
Physician: S. Kobza
Diagnosis: Acute Pneumonia

Lviv CH #1
Clinical Protocol #1

Patient: Olga Koliuk

Expected LOS: 12 days
Adm/Disch.: 7/25-8/2
Allergy: non
Hepatitis B: non

	Polyclinic Visits		**Days of Stay (Hospital)**				
Services	**1**	**2**	**1**	**2**	**3**	**4**	
Patient's assessment, diagnosis on admission	average complexity	average complexity	average complexity +	average complexity +	average complexity +	satisfactory +	>>
Consultations		of a phthisio-logist +	of an ENT physician +	of a phthisiolo-gist (if needed) -			>>
Diagnostic procedures, tests, blood preassure, breath rate	Chest X-ray +	General blood/ urine test (+), blood sugar level (+), EKG	Blood preassure (+), pulse, breath rate, temperature, EKG (+)	Blood preassure, pulse, breath rate, temperature (+), biochemical test (+)	Blood preassure, pulse, breath rate, temperature	Blood preassure, pulse, breath rate, temperature	>>
Treatment, physioprocedures, physical exercises, manipulations						Physical exercises	>>
Patient regiment	out-patient	out-patient	bed-stay	bed-stay	bed-stay	bed-stay	>>
Pharmaceutical treatment, inc. IV injections			Antibio-tics, broncho-litics (+)	Antibio-tics, broncho-litics (+)	Antibio-tics, broncho-litics (+)	Antibio-tics, broncho-litics (+)	>>
Diet	#15	#15	#15	#15	#15	#15	>>
Family and patient's education			Breathing exercises (+)	Breathing exercises (+)	Breathing exercises (+)	Breathing exercises (+)	>>
Expected discharge date, reasons, changes			12	11	10	9	>>
Psycological needs of the patient, individual activities				About harm of smoking			>>
Services	**P o l y c l i n i c**		**H o s p i t a l**				

Department:: Int. Medicine
Physician: S. Kobza
Diagnosis: Acute Pneumonia

Lviv CH #1
Clinical Protocol #1

Patient: Olga Koliuk

Expected LOS: 12 days
Adm/Disch.: 7/25-8/2
Allergy: non
Hepatitis B: non

Days of Stay (Hospital)								
5	6	7	8	9	10	11	12	
satisfactory +	satisfactory +	satisfactory +	satisfactory +	satisfactory	satisfactory	satisfactory	satisfactory	>>
								>>
Blood preassure, pulse, breath rate, temperature	Blood preassure, pulse, breath rate, temperature	Blood preassure, pulse, breath rate, temperature	Blood preassure, pulse, breath rate, temperature X ray test (+), general blood test (+)	Blood preassure, pulse, breath rate, temperature	X-ray test, general blood test,	Blood preassure, pulse, breath rate, temperature	Blood preassure, pulse, breath rate, temperature	>>
Physical exercises	Physical exercises	Physical exercises, Potassium Iodine electropho-resis (-)	Physical exercises, Potassium Iodine electropho-resis (-)	Physical exercises, Potassium Iodine electropho-resis	Physical exercises, Potassium Iodine electropho-resis	Physical exercises, Potassium Iodine electropho-resis	Physical exercises, Potassium Iodine electropho-resis	>>
bed-stay	bed-stay	bed-stay	bed-stay	bed-stay	bed-stay	bed-stay	bed-stay	>>
Antibio-tics, broncho-litics (+)	Antibio-tics, broncho-litics (+)	Antibio-tics, broncho-litics (+)	Antibio-tics, broncho-litics (+)	Antibiotics, broncholitics, autohemothera py, antiinflamatory, dissolving	Antibiotics, broncholitics, autohemothera py, antiinflamatory, dissolving	Antibiotics, broncholitics, autohemothera py, antiinflamatory, dissolving	Antibiotics, broncholitics, autohemothera py, antiinflamatory, dissolving	>>
#15	#15	#15	#15	#15	#15	#15	#15	>>
Breathing exercises (+)	Breathing exercises (+)	Breathing exercises (+)	Breathing exercises (+)	Breathing exercises				>>
8	7	6	5	4	3	2	Discharge	>>
								>>
Hospital					Hospital			

Department:: Int. Medicine
Physician: S. Kobza
Diagnosis: Acute Pneumonia

Lviv CH #1
Clinical Protocol #1

Patient: Olga Koliuk

Expected LOS: 12 days
Adm/Disch.: 7/25-8/2
Allergy: non
Hepatitis B: non

Polyclinic Visits					
1	2	3	4	5	6
satisfactory	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
Blood preassure, pulse, breath rate,		Blood preassure, pulse, breath rate,		Blood preassure, pulse, breath rate, general blood test	
Health promotion therapy, massage					
Vitamins, aloe	Vitamins, aloe	Vitamins, aloe	Vitamins, aloe	Vitamins, aloe	Vitamins, aloe
#15	#15	#15	#15	#15	#15
		Do not breathe in irritating substances!			
					Issue of a sick leave
Polyclinic				Polyclinic	

MUSKEGON MERCY COMMUNITY HEALTHCARE SYSTEM
A member of Mercy Health Service
Muskegon, Michigan

RENAL CLINICAL PATHWAY

CONGESTIVE HEART FAILURE/FLUID OVERLOAD / PULMONARY EDEMA

Date Adm: _____

Discharge: _____

HEALTH: Lungs Clear, Acceptable B/P, No SOB Minimal Edema
ACTIVITY: Pt. performs ADL's within limits of disease
KNOWLEDGE: Disease, Dry Wt. Diet, Medication, Fluid Restriction, Care of Access

Problem #	Day	#1	#2	#3	#4	#5
	Date					
	Location	ER/PCU	2W	2 West → 3 West	3W	3W
	Consults	Renal: MSW: Disc needs RD - Diet & Fluid Restrict Cardiology if indicated	Renal: MSW: Disc needs RD - Diet & Fluid Restrictions	Renal: MSW: Disc needs RD - Diet & Fluid Restrictions		Home care if needed
	Tests	1260 CBC 660 Oximeter → EKG CXR	Oximeter →	CBC 660 DC Oximeter CXR if indicated	660/CBC if indicated	
#1	Physiological Hemostasis Altered R/T too much Fluid (fluid overload)	Telemetry → O2 @ 2LNC → Vitals Q 4° - PRN Assess resp status Q 1° C&DB Q 1° I&O: Fluid Restriction → Daily Wt → HOB ↑ → Assess Edema →		DC O2 PRN →	D/C O2	
#2	Altered Skin Integrity R/T Dialysis Access	Dialysis access established H. Dialysis or CAPD daily Dry wt evaluated	Hemo Dialysis if indicated	(Pt scheduled on normal day) H. Dialysis Patient at dry wt.	Pt has dialysis sched → Pt knows access site care → Dry wt maintained →	
#3	Altered Diet R/T Nutritional Status	Renal diet NAS fluid restriction 1500cc →		Reassess fluid restriction →		
#4	Medications	IV NS CKOR by pump → Antihypertenisves (hold before HD) PHOS BINDERS Iron supplement Epogen Bowel meds Vitamins		Heplock	D/C Heplock	
#5	Activity Intolerance	BR/BSC Blockcare	Chair QID Rehab evaluation and assess ability to perform self care	Activity as tolerated → Rehab if indicated		
#6	Education Knowledge Deficit R/T Compliance of Treatment	Assess learning needs Barriers to learning R/T Diet, Access, Fluid Status Medications		Pt can verbalize dry wt Fluid restrictions Diet 75% of Medications Given CHF instruction booklet		Pt will notify dialysis if 6# above dry wt, or becomes SOB. Pt knows fluid restrictions and medications, care of access

HDU 2025-1

Signature _____ Signature _____ Signature _____

Date _____ Date _____ Date _____

Mercy Community Healthcare System
Muskegon, MI

Congestive Heart Failure

	DAY 5	O	C	DAY 6	O	C	DAY 7	O	C			
Consults												
Tests	EKG prn →			→			→					
Medications	Reinforce medication teaching			Re-evaluate discharge medication plans → Appropriate monograph → Complete appropriate wallet cards →			Review medication plans → →					
Treatment	VS q 8 hours → O2 as indicated → Daily weight (?) → D/C monitor (if indicated) →			→ Evaluate O2 as needed → → →			→ → → →					
Nutrition	Reinforce D/C diet plan →			Evaluate and reinforce discharge diet →			→					
Activity	Increased activity →			→			→					
Teaching	Evaluate specific patient needs			Review all discharge plans			→					
Discharge Planning	Referral to community resources →			→			→					
Variance												

EXPECTED OUTCOMES

1. The patient will _____ date

O = Ordered

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Geriatric Major Depression

1) Check weekly indicators daily.
2) Place a ✓ mark in appropriate box when weekly indicator is due.
3) Yellow, date, and initial all indicators when complete.
4) All variances should be documented on variance sheet.

SYSTEM-WIDE

INDICATORS	WEEKLY INDICATOR	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
ASSESSMENTS				• S.W. assessment completed. • Psychiatric assessment completed.		
	O.T. assess within 3 working days.					
	Assess for precautions per hosp.policy.		• S.W. to contact family & introduce self. • O.T. to introduce self to pt.	• MTP processed with pt.		
	Assess: diet/nutritional intake sleep affect psychomotor level	• Initiate MTP/ • Complete nsg assessment/data base	• Assess sleep pattern • Assess eating pattern • Complete nsg assessment/data base if unable to obtain on Day 1.	• Assess if chaplain intervention needed, notify.	• Document reassessment of severity of illness.	
CONSULTS		• H&P completed within 24? • Order consults PRN.	• Consults completed.			
TESTS	Tests	Orders for: Pelvic/Pap exam offered if appropriate. EKG, CBC, Smac, U/A, Thyroid panel, RPR, etc. if indicated.	• Notify MD of abnormal lab values. • Mini Mental Status exam.	• Notify MD of abnormal lab values.	• Notify MD of abnormal lab values.	• Notify MD of abnormal lab values.
TREATMENTS	Weigh pt. weekly and record.					
		• Full V.S. & Prn as indicated.	• Full V.S. & Prn as indicated.	• Full V.S. & Prn as indicated.		
MEDS		• Medication Education before 1st dose by RN & document.		• Assess effectiveness of meds.		• Assess effectiveness of meds.
TEACHING	Evaluate effectiveness of teaching & document.	• Assess for education need and document. • Provide med cards to pt. if applicable.			• RN to review meds with pt. • Begin teaching on signs & symptoms of major depression.	• Identify family's education needs, doc.

CMH-CH: dcs 01/16/93 03/03/93 12/6/93 4/28/94

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Major Depression/Adjustment Disorder
Adolescent

1) Check weekly indicators daily.
2) Place a ✓ mark in appropriate box when weekly indicator is due.
3) Yellow, date, and initial all indicators when complete.
4) All variances should be documented on variance sheet.

SYSTEM-WIDE

INDICATORS	WEEKLY INDICATOR	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
ASSESSMENTS				• S.W. assessment completed. • Psychiatric assessment completed.		
	O.T. assess within 3 working days.					
	Assess for precautions per hosp.policy.		• S.W. to contact family & introduce self. • O.T. to introduce self to pt.	• MTP processed with pt. • Education assessment completed & in chart.		
		• Initiate MTP • Complete nsg assessment/data base	• Cpmplete nsg assessment/data base if unable to obtain on Day 1.			
CONSULTS		• H&P completed within 24°. • Order consults PRN.	• Psych testing ordered if needed. • Consults completed			• Psychological testing completed & preliminary report in chart.
TESTS	Tests	Orders for: Pelvic/Pap exam offered, if approp.				
		EKG, U/A tox, & UCG if indicated: CBC, Smac, Thyroid panel, U/A.	• Notify MD of abnormal labs values.	• Notify MD of abnormal lab values.	• Notify MD of abnormal lab values.	• Notify MD of abnormal lab values.
TREATMENTS	Weigh pt. weekly and record.					
		• Full V.S. & PRN as indicated.	• Full V.S. & PRN as indicated.	• Full V.S. & PRN as indicated.		
MEDS		• Pt. & fam medication education before 1st dose by RN & document. • Medication sheet completed.	• Assess for meds.	• Assess effectiveness of meds.		• Assess effectiveness of meds.
TEACHING	CD education					
	Evaluate effectiveness of teaching & document.	• School forms signed • Assess for educational need & doc.		• Contact made with school & work obtained.		
	School 5 x/wk for 3°		• Start work in classroom.			

CMH-CH:dh 01/16/93, Revised: 2/26/93, 12/6/93, 2/28/94, 3/25/94

CRITICAL PATHWAY VARIANCE REPORT

Date	Unit	Variances (#)	Action Taken	Other Variances

a:turp#2.cp

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UNITY VARIANCE TRACKING SHEET
Case Type Abdominal Hysterectomy DRG 359 ICD9 _____
ELOS 3 Days ADMIT DATE _____ D/C DATE _____
Unit _____ Physician _____
Secondary Diagnoses/Surgeries _____

BE SURE TO STAMP THIS SHEET, FILL IN ADMIT DATE, D/C DATE AND UNIT

DATE/ SHIFT	ARP DAY#	☑ ON PATH	VARIANCE (WHAT)	SOURCE (WHY)	ACTION Y / N	FURTHER EXPLANATION*	INITIAL Dept.

See codes listed on back

VARIANCE: *Shows us how patients and clinicians differ from the norm, as well* where an institution might improve it's service; ARP's are expected tasks and outcomes. Variances are unexpected events.

Clinical protocol